## ETROPEAN

## **Patent Abstracts of Japan**

PUBLICATION NUMBER

03146346

PUBLICATION DATE

21-06-91

APPLICATION DATE

01-11-89

APPLICATION NUMBER

01286837

APPLICANT: MATSUSHITA ELECTRIC IND CO LTD;

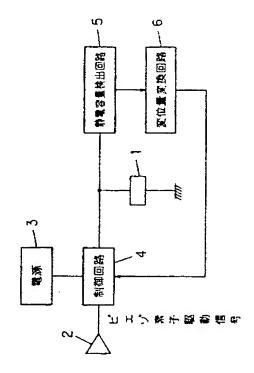
INVENTOR: HORIO HIDEAKI;

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B41J 2/045 B41J 2/055

TITLE

DRIVING METHOD FOR INK JET HEAD



ABSTRACT: PURPOSE: To keep unnecessary dots from generating, stabilize ink meniscus in a short period of time and make it possible to perform a high speed printing with high grade even when a driving frequency of a piezoelectric element is raised by a method wherein an electrostatic capacity of a piezoelectric element is detected, and the waveform of a piezoelectric element driving signal is controlled conforming to this electrostatic capacity.

> CONSTITUTION: A control circuit 4 controls a piezo-element 1 by a piezoelement driving signal which is output from a piezo-element driving signal generating device 2. An electrostatic capacity detecting circuit 5 detects a change quantity of the electrostatic capacity of the piezo-element 1 by displacement of the piezo- element 1, and converts it to a voltage. A displacement quantity converting circuit 6 converts the output voltage by the electrostatic capacity detecting circuit 5 into a voltage which is in proportional with the displacement quantity of the piezo-element 1, and outputs it. Thus, to the control circuit 4, feedback is applied to a piezo displacement command signal from the piezo-element driving signal generating device 2, the piezo-element can be precisely controlled as an actuator of an ink jet head.

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